

Date: Wednesday, 22/10/2008 7:05:18 AM
 User: Linda Lacelle

Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd. Drawing Name : D412-664-203
 Job Number : 42759
 Estimate Number : 10804
 P.O. Number :
 This Issue : 22/10/2008 S.O. No. :
 Prsht Rev. : NC Part Number : D412664203
 First Issue : / / Type : CROSSTUBES Drawing Number : REWORK
 Previous Run : 00015 Drawing Revision :
 Material :
 Due Date : 28/10/2008 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment :

Additional Product

Job Number:



DART		TEL: 1-613-632-3336	
TRANSPORT CANADA APPROVAL # 09-89		FAX: 1-613-632-4443	
P/N	D412-664-203	CHG	CHG006
DESC.	Crosstube Aft High	STC	SH01-9
LOT	B42427	STC	SR01298NY
MODIF	Bell 412	STC	
US PATENT # 5,730,483 CANADA FOREIGN PATENTS PENDING		MADE IN CANADA	

Seq. #: Machine Or Operation:

Descr

1.0 D412664203 Crosstube Aft



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
 Crosstube Aft
 B42427 CHG 006

Pulled from stock for test project 00257A

2.0 SPRAY PAINTING SPRAY PAINTING



(PB) →

Comment: SPRAY PAINTING

- Disassemble the tube, and save and identify all the hardware.
- Wash the outside surface of the tube with wash'n'wipe 4105
- Buff the affected area to remove the knick in between the center support and the chafing shield.
- Sand the outside of the tube with 320 grit paper.
- Re-paint in accordance with QSI005.

08-10-29

3.0 QC14 INSPECT SPRAY PAINT



08 10 30 (1)

Comment: INSPECT SPRAY PAINT

4.0 D2856600 Abrasion Strip



Comment: Qty.: 1.7640 f(s)/Unit Total: 1.7640 f(s)
 Pick:
 Qty Part number Description Batch
 2 D2856-600(Cut to 10.090") Abrasion Strip

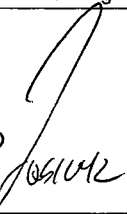
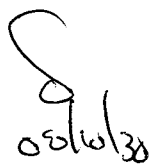

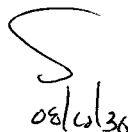
36398

08-10-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D412-644-203 PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: 11 Date: 08.11.10

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: 42759		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/10/36	4 2.0	During Assem Dis-assembly it was found that all four (Qty 4) MS21920-28 clamps were damaged from testing		Scrap and Destroy and Repl/ce Qty (4) MS21920-28 B" 108847 25 08.10.20	RT 08.10.30			

NOTE: Date & initial all entries

Date: Wednesday, 22/10/2008 7:05:18 AM
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Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D412-664-203

Job Number: 42759

Part Number: D412664203

Job Number:



Seq. #: Machine Or Operation: Description :

5.0 CROSSTUBES CROSSTUBES RESOURCE 1



Comment: CROSSTUBES RESOURCE 1

Assemble as per dwg.

+

RT 08-10-30

6.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Sos/10/30 (K)

7.0 PACKAGING 1 PACKAGING RESOURCE #1



* Ensure correct paper work is included.



Comment: PACKAGING RESOURCE #1

New labels with the new batch # are required @ CHG006

Re-package the tube with the original kit, and the new labels:

8.0 QC4 INSPECT 100% KITS FOR COMPLETENESS



* Ensure correct paperwork is included.



Comment: INSPECT 100% KITS FOR COMPLETENESS

Sos/11/4 (K)

9.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Return to stock.

Location:

Per G

Sos/11/04 (K)

10.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/11/05 (K)

Job Completion



MF 08-11-04

Date: Wednesday, 04/06/11 2:19:21 PM

User: Jason Murdoch

JOB HISTORY : DETAIL

Job Number	: 00257A	Customer	: Dart Aerospace Ltd.
Estimate Number	: 10068	DWG Name	: INITIAL PROTOTYPE TEMPLATE
Purchase Order #	:	Part Number	: INITIAL PROTOTYPE
Complete Date	: 06/24/09 5:19:22 PM	DWG Number	:
		Rev.	:

DUE DATE	ORDERED	DELIVERED
08/08/08	1	0

1.0 MFG ENGINEERING Internal Operation

DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost
10/15/08	ARMIO1: Armitage, Russel Mark	Run	0.000	8.81	\$251.44	8.81	0.00
10/16/08	ARMIO1: Armitage, Russel Mark	Run	0.000	2.74	\$78.20	2.74	0.00
10/17/08	ARMIO1: Armitage, Russel Mark	Run	0.000	3.80	\$108.45	3.80	0.00
10/18/08	SAUV01: Sauve, Jean-Francois	Run	0.000	11.50	\$202.98	11.50	0.00
10/19/08	SAUV01: Sauve, Jean-Francois	Run	0.000	11.57	\$204.21	11.57	0.00
10/21/08	ARMIO1: Armitage, Russel Mark	Run	0.000	3.80	\$108.45	3.80	0.00
10/30/08	PAQU03: Paquette, Dan	Run	0.000	18.15	\$344.67	18.15	0.00
10/30/08	BRUN01: Brunet, Marc	Run	0.000	16.00	\$303.84	16.00	0.00
10/30/08	TITL01: Titley, Ian	Run	0.000	0.30	\$4.85	0.30	0.00
11/06/08	BRUN01: Brunet, Marc	Run	0.000	3.00	\$56.97	3.00	0.00
11/06/08	PAQU03: Paquette, Dan	Run	0.000	3.50	\$66.47	3.50	0.00
12/17/08	SAUV01: Sauve, Jean-Francois	Run	0.000	13.00	\$229.45	13.00	0.00
12/18/08	SAUV01: Sauve, Jean-Francois	Run	0.000	12.00	\$211.80	12.00	0.00
12/19/08	SAUV01: Sauve, Jean-Francois	Run	0.000	12.05	\$212.68	12.05	0.00
12/23/08	SAUV01: Sauve, Jean-Francois	Run	0.000	10.17	\$179.50	10.17	0.00
02/05/09	BRUN01: Brunet, Marc	Run	1.000	4.01	\$76.15	4.01	0.00
02/05/09	PAQU03: Paquette, Dan	Run	1.000	5.03	\$95.52	5.03	0.00
02/06/09	BRUN01: Brunet, Marc	Run	0.000	3.46	\$65.71	3.46	0.00
02/06/09	PAQU03: Paquette, Dan	Run	0.000	3.47	\$65.90	3.47	0.00
02/09/09	PAQU03: Paquette, Dan	Run	2.000	6.80	\$129.13	6.80	0.00
02/09/09	BRUN01: Brunet, Marc	Run	0.000	8.56	\$162.55	8.56	0.00
02/10/09	BRUN01: Brunet, Marc	Run	0.000	0.96	\$18.23	0.96	0.00
02/10/09	MAHE01: Maheu, Andrew	Run	0.000	0.02	\$0.32	0.02	0.00
02/10/09	BRUN01: Brunet, Marc	Run	0.000	1.16	\$22.03	1.16	0.00
02/10/09	MAHE01: Maheu, Andrew	Run	0.000	3.51	\$56.72	3.51	0.00
02/11/09	MAHE01: Maheu, Andrew	Run	0.000	0.21	\$3.39	0.21	0.00
02/12/09	MAHE01: Maheu, Andrew	Run	3.000	5.87	\$94.86	5.87	0.00
02/17/09	MURD02: Murdoch, Matthew	Run	0.000	1.00	\$16.16	1.00	0.00
03/04/09	PAQU03: Paquette, Dan	Run	0.000	0.30	\$5.70	0.30	0.00
03/04/09	BRUN01: Brunet, Marc	Run	0.000	0.31	\$5.89	0.31	0.00

Subtotal:	QTD:	7 CTD:	0	175.06	\$3382.22
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7.0 AN640A-Bolt INVENTORY ITEM

DATE	EMPLOYEE	TYPE	Qty	COST
10/28/08	LAVO01: Lavoie, Chantal	AN640A	2.000	\$5.96

Lot# 108940 Qty. 2

Subtotal:	QTD:	0 CTD:	2	\$5.96
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Date: Wednesday, 04/06/11 2:19:21 PM

User: Jason Murdoch

JOB HISTORY : DETAIL

Job Number	: 00257A	Customer	: Dart Aerospace Ltd.
Estimate Number	: 10068	DWG Name	: INITIAL PROTOTYPE TEMPLATE
Purchase Order #	:	Part Number	: INITIAL PROTOTYPE
Complete Date	: 06/24/09 5:19:22 PM	DWG Number	: Rev. :

9.0 OUTSIDE SERV.11 Sub-contr./External OP.

DATE	EMPLOYEE	TYPE	Qty	COST
12/04/08	LAVO01: Lavoie, Chantal	IN	3.000	\$2085.00

Subtotal: QTD: 0 CTD: 3 \$2085.00

	TIME	COST
Machine Time:	175.06	\$0.00
Labor:	175.06	\$3382.22
Sub-contract (external Op.):		\$2085.00
INVENTORY ITEM:		\$5.96
SUB-COMPONENT (SUB-JOB):		\$0.00
Total:		\$5473.18

COST PER UNIT: \$5473.18

Date: Wednesday, 04/06/11 2:20:00 PM

User: Jason Murdoch

JOB HISTORY : DETAIL

Job Number : 00257		Customer : Dart Aerospace Ltd.						
Estimate Number : 10062		DWG Name : B412 STEEL AFT X						
Purchase Order # :		Part Number : ENGINEERING						
Complete Date : 06/24/09 5:19:08 PM		DWG Number : B412 STEEL AFT X						
Rev. : N/A								
DUE DATE		ORDERED						
08/08/08		1						
		0						
1.0 ENGINEERING 1		Internal Operation						
DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost	
08/01/08	SHEP01: Shepherd, David	Run	0.000	0.50	\$14.27	0.50	0.00	
10/03/08	PETS01: Petsche, Michael	Run	0.000	7.52	\$214.62	7.52	0.00	
10/06/08	SHEP01: Shepherd, David	Run	0.000	1.00	\$28.54	1.00	0.00	
10/07/08	PETS01: Petsche, Michael	Run	0.000	7.17	\$204.63	7.17	0.00	
10/08/08	ARMI01: Armitage, Russel Mark	Run	0.000	1.17	\$33.39	1.18	0.00	
10/16/08	PETS01: Petsche, Michael	Run	0.000	8.00	\$228.32	8.00	0.00	
10/24/08	PETS01: Petsche, Michael	Run	0.000	7.00	\$199.78	7.00	0.00	
10/29/08	PETS01: Petsche, Michael	Run	0.000	8.10	\$231.17	8.10	0.00	
11/03/08	PETS01: Petsche, Michael	Run	0.000	7.02	\$200.35	7.02	0.00	
11/06/08	PETS01: Petsche, Michael	Run	0.000	4.42	\$126.15	4.42	0.00	
11/06/08	SHEP01: Shepherd, David	Run	0.000	1.00	\$28.54	1.00	0.00	
11/10/08	PROV01: Provencal, Chris	Run	0.000	6.32	\$180.37	6.32	0.00	
11/10/08	PETS01: Petsche, Michael	Run	0.000	9.25	\$264.00	9.25	0.00	
11/11/08	PROV01: Provencal, Chris	Run	0.000	7.30	\$208.34	7.30	0.00	
11/12/08	PROV01: Provencal, Chris	Run	0.000	6.72	\$191.79	6.72	0.00	
11/13/08	PROV01: Provencal, Chris	Run	0.000	6.33	\$180.66	6.33	0.00	
11/14/08	PROV01: Provencal, Chris	Run	0.000	2.95	\$84.19	2.95	0.00	
11/15/08	PROV01: Provencal, Chris	Run	0.000	3.67	\$104.74	3.67	0.00	
11/17/08	PROV01: Provencal, Chris	Run	0.000	7.62	\$217.47	7.62	0.00	
11/20/08	PROV01: Provencal, Chris	Run	0.000	6.65	\$189.79	6.65	0.00	
11/21/08	PROV01: Provencal, Chris	Run	0.000	8.42	\$240.31	8.42	0.00	
11/22/08	PROV01: Provencal, Chris	Run	0.000	3.42	\$97.61	3.42	0.00	
11/24/08	PROV01: Provencal, Chris	Run	0.000	6.77	\$193.22	6.77	0.00	
11/24/08	PETS01: Petsche, Michael	Run	0.000	4.37	\$124.72	4.37	0.00	
11/26/08	HUM001: Hum, Peter	Run	0.000	1.00	\$28.54	1.00	0.00	
11/27/08	PROV01: Provencal, Chris	Run	0.000	4.00	\$114.16	4.00	0.00	
11/29/08	PROV01: Provencal, Chris	Run	0.000	2.00	\$57.08	2.00	0.00	
12/04/08	PROV01: Provencal, Chris	Run	0.000	3.27	\$93.33	3.27	0.00	1500 OVERHEAD LABOR
12/08/08	PROV01: Provencal, Chris	Run	0.000	3.10	\$88.47	3.10	0.00	
12/09/08	PROV01: Provencal, Chris	Run	0.000	4.12	\$117.58	4.12	0.00	
01/31/09	PROV01: Provencal, Chris	Run	0.000	1.43	\$40.81	1.43	0.00	
02/09/09	PROV01: Provencal, Chris	Run	0.000	3.00	\$85.62	3.00	0.00	
02/17/09	ARMI01: Armitage, Russel Mark	Run	0.000	2.14	\$61.08	2.14	0.00	
02/17/09	ARMI01: Armitage, Russel Mark	Run	0.000	2.08	\$59.36	2.08	0.00	
02/18/09	ARMI01: Armitage, Russel Mark	Run	0.000	3.35	\$95.61	3.35	0.00	
02/18/09	PETS01: Petsche, Michael	Run	0.000	8.50	\$242.59	8.50	0.00	
02/19/09	ARMI01: Armitage, Russel Mark	Run	0.000	3.95	\$112.73	3.95	0.00	
02/23/09	PROV01: Provencal, Chris	Run	0.000	4.00	\$114.16	4.00	0.00	
02/26/09	PROV01: Provencal, Chris	Run	0.000	0.85	\$24.26	0.85	0.00	

Date: Wednesday, 04/06/11 2:20:00 PM

User: Jason Murdoch

JOB HISTORY : DETAIL

Job Number	: 00257	Customer	: Dart Aerospace Ltd.
Estimate Number	: 10062	DWG Name	: B412 STEEL AFT X
Purchase Order #	:	Part Number	: ENGINEERING
Complete Date	: 06/24/09 5:19:08 PM	DWG Number	: B412 STEEL AFT X
		Rev.	: N/A

1.0 ENGINEERING 1 Internal Operation

DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost
03/03/09	ARMI01: Armitage, Russel Mark	Run	0.000	2.00	\$57.08	2.00	0.00
03/04/09	TITL01: Titley, Ian	Run	0.000	1.16	\$18.75	1.16	0.00
03/04/09	ARMI01: Armitage, Russel Mark	Run	0.000	8.60	\$245.44	8.60	0.00
03/05/09	ARMI01: Armitage, Russel Mark	Run	0.000	8.58	\$244.87	8.58	0.00
03/12/09	PROV01: Provencal, Chris	Run	0.000	2.00	\$57.08	2.00	0.00

Subtotal: QTD: 0 CTD: 0 201.82 \$5745.57

3.0 MFG ENGINEERING Internal Operation

DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost
09/24/08	PROV01: Provencal, Chris	Run	0.000	2.37	\$67.64	2.37	0.00
09/29/08	PROV01: Provencal, Chris	Run	0.000	6.00	\$171.24	6.00	0.00
10/02/08	PROV01: Provencal, Chris	Run	0.000	7.32	\$208.91	7.32	0.00
10/03/08	PROV01: Provencal, Chris	Run	0.000	2.48	\$70.78	2.48	0.00
10/04/08	PROV01: Provencal, Chris	Run	0.000	2.82	\$80.48	2.82	0.00
10/06/08	PROV01: Provencal, Chris	Run	0.000	6.60	\$188.36	6.60	0.00
10/07/08	PROV01: Provencal, Chris	Run	0.000	7.52	\$214.62	7.52	0.00
10/08/08	PROV01: Provencal, Chris	Run	0.000	6.53	\$186.37	6.53	0.00
10/10/08	PROV01: Provencal, Chris	Run	0.000	7.43	\$212.05	7.43	0.00
10/11/08	PROV01: Provencal, Chris	Run	0.000	2.90	\$82.77	2.90	0.00
10/14/08	PROV01: Provencal, Chris	Run	0.000	5.60	\$159.82	5.60	0.00
10/15/08	PROV01: Provencal, Chris	Run	0.000	5.47	\$156.11	5.47	0.00
10/16/08	PROV01: Provencal, Chris	Run	0.000	6.42	\$183.23	6.42	0.00
10/17/08	PROV01: Provencal, Chris	Run	0.000	7.03	\$200.64	7.03	0.00
10/18/08	PROV01: Provencal, Chris	Run	0.000	1.48	\$42.24	1.48	0.00
10/20/08	PROV01: Provencal, Chris	Run	0.000	6.88	\$196.36	6.88	0.00
10/21/08	PROV01: Provencal, Chris	Run	0.000	0.10	\$2.85	0.10	0.00
10/22/08	PROV01: Provencal, Chris	Run	0.000	5.13	\$146.41	5.13	0.00
10/23/08	PROV01: Provencal, Chris	Run	0.000	4.85	\$138.42	4.85	0.00
10/24/08	PROV01: Provencal, Chris	Run	0.000	7.55	\$215.48	7.55	0.00
10/25/08	PROV01: Provencal, Chris	Run	0.000	3.17	\$90.47	3.17	0.00
10/27/08	PROV01: Provencal, Chris	Run	0.000	7.13	\$203.49	7.13	0.00
10/28/08	PROV01: Provencal, Chris	Run	0.000	4.73	\$134.99	4.73	0.00
10/29/08	PROV01: Provencal, Chris	Run	0.000	5.87	\$167.53	5.87	0.00
10/30/08	PROV01: Provencal, Chris	Run	0.000	6.02	\$171.81	6.02	0.00
10/31/08	PROV01: Provencal, Chris	Run	0.000	5.87	\$167.53	5.87	0.00
11/01/08	PROV01: Provencal, Chris	Run	0.000	2.13	\$60.79	2.13	0.00
11/02/08	PROV01: Provencal, Chris	Run	0.000	1.58	\$45.09	1.58	0.00
11/03/08	PROV01: Provencal, Chris	Run	0.000	5.07	\$144.70	5.07	0.00
11/04/08	PROV01: Provencal, Chris	Run	0.000	7.42	\$211.77	7.42	0.00
11/05/08	PROV01: Provencal, Chris	Run	0.000	6.10	\$174.09	6.10	0.00
11/06/08	PROV01: Provencal, Chris	Run	0.000	6.00	\$171.24	6.00	0.00
11/07/08	PROV01: Provencal, Chris	Run	0.000	5.95	\$169.81	5.95	0.00

Date: Wednesday, 04/06/11 2:20:00 PM

User: Jason Murdoch

JOB HISTORY : DETAIL

Job Number	: 00257	Customer	: Dart Aerospace Ltd.
Estimate Number	: 10062	DWG Name	: B412 STEEL AFT X
Purchase Order #	:	Part Number	: ENGINEERING
Complete Date	: 06/24/09 5:19:08 PM	DWG Number	: B412 STEEL AFT X
		Rev.	: N/A

3.0 MFG ENGINEERING Internal Operation

DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost
11/08/08	PROV01: Provencal, Chris	Run	0.000	2.20	\$62.79	2.20	0.00

Subtotal: QTD: 0 CTD: 0 171.72 \$4900.88

		TIME	COST
	Machine Time:	373.55	\$0.00
	Labor:	373.54	\$10646.45
	Sub-contract (external Op.):		\$0.00
	INVENTORY ITEM:		\$0.00
	SUB-COMPONENT (SUB-JOB):		\$0.00
Total:			\$10646.45

COST PER UNIT: \$10646.45